4.2 Frequency of the Tests

Mercury lamp and standard lamp tests should be performed at least once per month, on a schedule appropriate to the observing program data calculations and reporting. Ordinarily, it is sufficient to perform only one set of tests; however, if the test data should indicate that some change has occurred in the spectral characteristics of the instrument, it may be necessary to repeat one or more of the tests after certain corrective measures, to be described later, have been taken.

Comment: The wedge Calibration mentioned is not the wedge calibration performed with a two lamp unit.

Deleted: , preferably near the 28th day of the month, while wedge calibration tests should be performed at 3-month intervals

4.3 Recording of Test Data

Spectrophotometer test data may be recorded on a form similar to that shown in Figure 2. The forms should be numbered consecutively in order to denote the order in which the tests are made. Any adjustments made to the spectrophotometer, or maintenance work performed, should be described on the back of the forms. With more modern computers, it is now possible to make worksheets that allow for the input of the information on this form, making the calculations directly as the data is input. Any organized method that allows the history of the tests and repairs to be easily reviewed is acceptable. It is very important that all records of the test data be saved in an organized manner, and studied for changes.

Deleted: should

OZONE SPECTROPHOTCMETER TESTS

OBSERVATORY: Sterling, Va.

INST. NUMBER: 72

DATE: 17 May 1962

Prepare in duplicate.

TO:

MERCURY LAMP TEST

Temp.	Beginning	19.0°C	
	End	19.0	
	Mean	19.0	
Q_1	(1)	81.2	
	(2)	88.2	
Mean		84.7	
Q_1	(1)	81.2	
	(2)	88.1	
Mean		84.65	
Q_1	(1)	81.2	
	(2)	88.0	
Mean		84.6	
Q_1	(1)	81.2	
	(2)	88.1	
Mean		84.65	
Q_1	(1)	81.2	
	(2)	88.1	
Mean		84.65	
Q_1 Mean of Above		84.65	
Q_1 from Table		84.50	
Difference		+0.15	

STANDARD LAMP TEST

Lamp No.		72 A	
Inst. Temp.		20.0°C	
Room Temp.		21.0	
AA	R	34.3	
	R	34.3	
	R	34.3	
CA	R	35.7	
	R	35.6	
	R	35.6	
C'A	R	71.7	
	R	71.7	
	R	71.8	
DA	R	36.2	
	R	36.1	
	R	36.1	
Mean Values of R	A	34.3	
	C	35.6	
	C'	71.7	
	D	36.1	
Trace Width at 1/2 Voltage		2.4"	

WEDGE CALIB. TEST

		Wave lengths	λλ D	λλ __
PLATES "C" AND "D"	X With Rhodium Plate OUT		153.8	
			153.5	
			153.5	
	X With Rhodium Plate IN		90.6	
			90.6	
	Mean X	out	153.6	
		in	90.6	
	Mean N	out	127.2	
		in	68.7	
	ΔN		58.5	
PLATE "A" ONLY	X With Rhodium Plate OUT		92.8	
			92.9	
			92.8	
	X With Rhodium Plate IN		29.0	
			29.0	
	Mean X	out	92.8	
		in	29.0	
	Mean N	out	70.9	
		in	12.5	
	ΔN		58.4	

Signature: WK

Figure 2. Sample form for recording spectrophotometer tests data.